

LIPAYEV, V.M.

PESHKOV, B.I.; LIPAYEV, V.M.

Controlling tarbagans with a mixture of chloropicrin, calcium
cyanide and sodium chloride. Tez.i dokl.konf.Irk.gos.nauch.-issl.
protivozhum.inst. no.1:33-34 '55. (MIRA 11:3)
(MARMOTS) (RODENTICIDES)

LIPAYEV, V.M. ; DUBOVIK, I.M.; DUBOVIK, V.I.; BUSOYEDOVA, N.M.

Rodents of the Argun River (Transbaikalia) flood lands. Izv.

Irk.gos.nauch.-issl.protivochum.inst. 16:39-55 '57.

(MIRA 13:7)

(ARGUN RIVER (TRANSBAIKALIA)--RODENTIA)

PESHKOV, B.I.; LIPAYEV, V.M.

Control of marmots with a "mixture" of chleropocrin and a calcium
cyanide mixture. Iz. Irk. gos. nauch.-issl. protivochum. inst. 16:
228-231 '57. (MIRA 13:7)

(CHLOROPICRIN) (CALCIUM CYANIDE)
(TRANSBAIKALIA--RODENT CONTROL) (MARMOTS)

BUSOYEDOVA, N.M.; DUBOVIK, V.I.; DUBOVIK, I.M.; ZHOVTYY, I.F.;

LIPAYEV, V.M.

Fleas of rodents in the flood-lands of the Argun River (Trans-
baikalia). Izv.Irk.gos.nauch.-issl.protivochum.inst. 17:39-
46 '58. (MIRA 13:7)

(ARGUN RIVER (TRANSBAIKALIA)--FLEAS)
(PARASITES--RODENTIA)

LIPAYEV, V.M.

Epizootic outbreaks of plague in northeastern ~~Mongolia~~ ~~Isr.~~ Irk.
gos. nauch.-issl. protivochum. inst. 21:43-62 '59. (MIRA 14:1)
(MONGOLIA--PLAGUE)

LIPIYEV, YS. YS.

Dissertation: "Effect of the Amide of nicotinic acid on oligogenesis of the liver."
Sov. Med. Sci., Kazan' State Medical Institute, Kazan', 1953. (Referativnyi Zhurnal--
Khimiya, No 11, Moscow, Jun 54)

SO: SUM 313, 23 Dec 1954

LIT. 15, 10. A.

✓ 1949. INVESTIGATION OF RATE OF GAS EMISSION FROM SPHERICAL PIECES OF COAL
AS A FUNCTION OF THEIR RADII. Lipacy, Yu.A. (Trud. Inst. Gorn. Dela (Trans.
Inst. Min., Acad. Sci. U.S.S.R.), 1950, vol. 3, 144-150). In order to throw
light on the phenomenon of outbursts in coal mines, in which pieces of all
shapes are thrown out, a theoretical examination is made for the case of a
spherical piece of coal which later divides into smaller spherical pieces.
The derived and experimental results are suggested. (L.)

LIPAYEV, Yu. A.

SKOCHINSKIY, A.A., akad.; KHODOT, V.V., kand. tekhn.nauk.; OMOSHINSKIY,
V.G., st. nauchnyy sotrudnik, kand. tekhn.nauk.; LIPAYEV, Yu. A.,
ml. nauchnyy sotrudnik.; PREMYSLER, Yu.S., ml. nauchnyy sotrudnik.;
ETTINGER, I.L., st. nauchnyy sotrudnik, kand. khim.nauk.;
YANOVSKAYA, M.F., st. nauchnyy sotrudnik, kand. tekhn. nauk.;
NIKOLAYEV, V.F., red. izd-va.; PROZOROVSKAYA, V.L., tekhn. red.;
IL'INSKAYA, G.M., tekhn. red.

[Methane in coal beds] Metan v ugol'nykh plastakh. Moskva,
Ugletekhizdat, 1958. 255 p. (MIRA 11:12)

1. Rukovoditel' Laboratorii vnezapnykh vybrosov Instituta gornogo
dela AN SSSR (for Khodot). 2. Laboratoriya prognoza i upravleniya
gazovydeleniyem Instituta gornogo dela AN (for Ettinger).
(Methane)
(Coal)

LIPAYEVA, Galina Alekseyevna; ROZENBERG, Samuil Vul'fovich; GOOSSEN, Kira
Yakovlevna; UDAL'TSOV, A.N., glavnyy red.; SENKEVICH, I.V., inzh.
red.

[Resonator installation for measuring dielectrics and magnito-
dielectrics at 3cm. wave lengths. Overload ammeter] Rezonatornaya
ustanovka dlia izmereniia dielektrikov i magnitodielektrikov pri
dline volny 3 sm. Peregruzochnyi ampermeter. Moskva, 1956. 17 p.
(Pribory i stendy. Tema 5, no.P-56-446) (MIRA 11:3)

1. Moscow. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii.
Filial.

(Electric resonators) (Ammeter) (Dielectrics)

Temperature and frequency dependence of the dielectric
constant and the loss angle of some solid dielectrics at the
wave length of 3 cm. G. I. Lukatskiy and G. I. Lopyrev.
Soviet Phys., JETP 3, 668-70, 1956 (English translation).
Sci. C. A. 50, 16221f

SKANAVI, G.I.; LIPAYEVA, G.A.

Temperature and frequency dependence of the dielectric constant and loss angle of some solid dielectrics at a 3 cm. wave length. Zhur. eksp.i teor. fiz. 30 no.5:824-832 My '56. (MLRA 9:9)

1.Fizicheskiy institut imeni P.N.Lobedeva Akademii nauk SSSR.
(Dielectrics)

LIPAYEVA, G. A.

Lipayeva, G.A. and G.I. Skanavi (Fizicheskiy institut imeni P.N. Lebedeva AN SSSR (Physical Institute imeni P.N. Lebedev, AS USSR)] On the Problem of Measuring High Dielectric Constants of Solid Dielectrics with Centimeter Waves.

(The Physics of Dielectric Interactions of the Millimeter Wave in the Physics of Dielectrics) Moscow, Izdat. AN SSSR, 1977, 104 p., 11 illustrations.

This volume publishes reports presented at the All-Union Conference on the Physics of Dielectrics, held in Dnepropetrovsk in 1976, organized by the "Physics of Dielectrics" Laboratory of the Dnepropetrovsk Institute of Physics and Mathematics (DPI) of the Institute of Physics of the AN (USSR) and the Dnepropetrovsk Institute of Physics and Mathematics (DPI) of the Dnepropetrovsk State University (DPSU).

68183

SOV/58-59-5-10839

5.4600

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 5, p 133 (USSR)

AUTHORS: Lipayeva, G.A., Skanavi, G.I.

TITLE: On Measuring the High Dielectric Constant of Solid ²¹Dielectrics at Microwave Frequencies

PERIODICAL: V sb.: Fiz. dielektrikov. Moscow, AS USSR, 1958, pp 124 - 128. Diskus. p 180

ABSTRACT: The authors describe a method for measuring the complex dielectric constant of solid dielectrics having a very high ϵ ($\epsilon > 200$) at $\lambda = 3$ cm. The proposed method represents a certain development of the well-known method of Powles and Jackson (Powles, Jackson, Proc. Inst. Electr. Engrs, 1949, Vol 96, part III, Nr 43, p 383): the auxiliary quarter-wave plate (a transformer) is replaced by a plate whose thickness differs somewhat from $\lambda/4$. Particular attention was paid to eliminating gaps between the waveguide walls and the samples; this was accomplished by sealing the samples in with the aid of Wood's alloy.

Card 1/2

68183

SOV/58-59-5-10839

On Measuring the High Dielectric Constant of Solid Dielectrics at Microwave Frequencies

The following results were obtained: barium titanate, $\epsilon = 656$, $\text{tg } \delta = 0.41$;
strontium - bismuth - titanate (SBT - 1), $\epsilon = 385$, $\text{tg } \delta = 0.34$; strontium - bismuth-
titanate (SBT - 2), $\epsilon = 575$, $\text{tg } \delta = 0.6$. (Fiz. in-t AS USSR).

V.I. Sarafanov

4

Card 2/2

81363

S/181/60/002/03/21/028
B006/B017

24.7800

AUTHORS: Lipayeva, G. A., Skanavi, G. I. (Deceased)

TITLE: Temperature Dependence of ϵ' and ϵ'' of Strontium Bismuth Titanate and Barium Titanate at a Frequency of 9,400 Mc/s

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 3, pp. 506-508

TEXT: It has been demonstrated already in previous papers that polycrystalline strontium bismuth titanates exhibit a marked relaxative polarization which results in very high values of the dielectric constant without the occurrence of piezoelectric properties. The occurrence of temperature maxima of dielectric losses is characteristic of this polarization. With increasing frequency, the temperature maxima of the loss angles are shifted toward higher temperatures. All investigations concerning this subject were carried out at frequencies of up to 10^6 cps. In the present paper, a report is given on investigations in the ultrahigh-frequency range. The complex dielectric constants of $(80.3 \text{ SrTiO}_3 + 19.7 \text{ Bi}_2\text{O}_3 \cdot 2\text{TiO}_2)$ and barium titanate at 10^{10} cps were

Card 1/3

81363

Temperature Dependence of ϵ' and ϵ'' of
Strontium Bismuth Titanate and Barium
Titanate at a Frequency of 9,400 Mc/s

S/181/60/002/03/21/028
B006/B017

measured in the temperature range $-180^{\circ} - +250^{\circ}\text{C}$. Method and apparatus are described in Ref. 2. Fig. 1 shows a cross section of the waveguide, sample, furnace, and cooling pipe. For control, the same measurements were made with calcium titanate. These measurements were made at liquid nitrogen temperature. The results proved the relaxative character of polarization in strontium bismuth titanate. Fig. 2 shows ϵ' and ϵ'' as a function of $1/T$ at 10^{10}cps in a wide temperature range. In the range of high temperatures $\epsilon'(1/T)$ approaches the straight line which was obtained by extrapolation of data at 10^6cps . At 10^{10}cps a maximum of dielectric losses occurs due to relaxation, which, compared with that at 10^6cps , is considerably shifted toward higher temperatures; it is also somewhat higher. The shift of the temperature maximum of ϵ'' on passing the transition from 10^6 to 10^{10}cps is 206°C . According to the Debye formula, the activation energy is $\approx 0.47\text{ eV}$. Fig. 3 shows the frequency dependence of ϵ and $\tan\delta$ at room temperature. Also these curves prove the existence of relaxative polarization. The dispersion of the dielectric constant brought about by relaxation processes causes not only a decrease

Card 2/3

Temperature Dependence of ϵ' and ϵ'' of
Strontium Bismuth Titanate and Barium
Titanate at a Frequency of 9,400 Mc/s

81363
S/181/60/002/03/21/028
B006/B017

of ϵ' from 850 to 370, but it can also be expected that a further reduction of the dielectric constant occurs in the far infrared. Fig. 4 shows the temperature dependence of ϵ' and ϵ'' for barium titanate and, for comparison, curves from other papers. The deviations are ascribed to different composition and purity of the samples. At liquid nitrogen temperature, $\epsilon' = 125$ and $\epsilon'' = 39$. Laboratory assistant Z. F. Makarkina participated in the measurements. There are 4 figures and 5 references: 3 Soviet and 1 German.

ASSOCIATION: Fizicheskiy institut im. Lebedeva AN SSSR Moskva (Physics
Institute imeni Lebedev, AS USSR, Moscow)

SUBMITTED: June 1, 1959

Card 3/3

24.7700

38921

S/181/62/004/006/036/051
B108/B138

AUTHOR: Lipayeva, G. A.

TITLE: Temperature dependence of the complex dielectric permittivity of some titanates between 20 and 1,000°C

PERIODICAL: Fizika tverdogo tela, v. 4, no. 6, 1962, 1613-1618

TEXT: The complex dielectric permittivity of some poly- and monocrystalline titanates and of some other dielectrics was measured on audio-frequencies at temperatures between 20 and 1,000°C. A special sample holder was designed to ensure practically no-losses when heating up to 1,000°C. Most of the polycrystalline samples showed an enormous rise in both the imaginary and the real part of the dielectric permittivity with increasing temperature. The differences were up to nine orders of magnitude between room temperature and 1,000°C. The real part of dielectric permittivity of polycrystals at 1,000°C was always much greater than that of single crystals. The imaginary parts of poly- and monocrystals did not differ so much. Some of the materials (SrTiO_3 , TiO_2) have a maximum in the temperature dependence of the dielectric permittivity. There are 5 figures and
Card 1/2

Temperature dependence of the ...

S/181/62/004/006/036/051
B108/B138

1 table.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR Moskva
(Physics Institute imeni P. N. Lebedev AS USSR, Moscow)

SUBMITTED: February 17, 1962

Card 2/2

LIPAEVA, I. I.

Desert Fauna - Balkhash, Lake Region

Structure of leaves of desert plants of the Southern Balkhash Lake region. Biul.
MOIP. Otd. biol. 57, no. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

LIPAYEVA, L.I.

Some internal and environmental correlations in the structure of
the water-conducting system and transpiration apparatus in plants.
Trudy Inst.fisiol.rast. 8 no.2:270-298 '54. (MLRA 8:5)

1. Akademiya nauk Kaz.SSR.
(Plants---Transpiration)

LIPAYEVA, L. I.

Some correlations of the leaf structure of plants in relation
to air temperatures and moisture of their habitats. Trudy Inst
fiziol.rast. 9:254-268 '55. (MIRA 8:8)
(Leaves)

LIPAYEVA, L. I.

Concerning T.D. Lysenko's views on the "vitality" of plant and animal
organisms [with summary in English]. Biol. MOIP. Otd. biol. 61 no. 4:
67-74 J1-Ag '56. (MIRA 10:8)
(GENETICS) (LYSENKO, TROPIM DENISOVICH, 1898-)

LIPAYEVA, L.I.

Role of polyploidy in plant evolution. Biol.MOIP.Otd.biol. 63 no.5
146-149 S-0 '58 (MIRA 11:12)
(POLYPLOIDY)
(TIEN SHAN--MILK VETCHES)

LIPAYEVA, L.I.

Nature of heterosis in plants. Biul. MOIP. Otd. biol. 66 no.5:102-
114 S-O '61. (MIRA 14:10)
(HETEROSIS) (HYBRIDIZATION, VEGETABLE)

LIPAYEVA, L.I.

Polyploidization of tissues in plant ontogeny. Trudy MOIP. Otd. biol.
5:90-97 '62. (MIRA 16:5)

1. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii
Gosudarstvennogo komiteta Soveta Ministrov SSSR po koordinatsii
nauchno-issledovatel'skikh rabot i AN SSSR, Moskva.
(POLYPLOIDY) (PLANT CELLS AND TISSUES)

LIPAYEVA, L.I.

Tetraploid form of *Lychnis chalcedonica* L. Biul. Glav. bot.
sada no.56:99-101 '64. (MIRA 18:5)

1. Institut nauchnoy i tekhnicheskoy informatsii AN SSSR i
Glavnyy botanicheskiy sad AN SSSR.

DOLIDZE, M.V. & LIFAYEVA, N.A.

Red stars in the area NGC 6819. Biul. Abast. astrofiz. obser. 32:53-
68 '65. (MIRA 18:10)

ZOTKIN, I.T.; LIPAYEVA, N.A.

Number of Delta-Aquarids in 1960. Biul.VAGO no.32:3-7 '62.
(MIRA 15:11)

1. Moskovskoye otdeleniya Vsesoyuznogo astronomo-geodezicheskogo
obshchestva.

(Meteors--May)

LIPCHAK, Mariya Mikhaylovna; YEL'KOV, F., red.; ZHDANOVA, G., tekhn. red.

[Progressive forms of retail service] Progressivnye formy trgovogo
obslyzhivaniia. Barnaul, Altaiskoe knizhnoe izd-vo, 1960. 43 p.
(MIRA 14:12)

(Retail trade)

E 17738-63

EWI(1)/EWP(q)/EWT(m)/BDS APFTC/ASD/SSD Pg-4 WH

ACCESSION NR: AP3007174

S/0072/63/000/009/0015/0016

AUTHOR: Lipchanskaya, R. V. (Engineer); Aksenov, V. S. (Engineer)

TITLE: Effect of uniform heating rate on the thermoluminescence of glass

SOURCE: Staklo i keramika, no. 9, 1963, 15-16

TOPIC TAGS: glass, silicate glass, cerium, cerium containing silicate glass, thermoluminescence, glow curve, irradiation, x-ray, heating rate, irradiated glass

ABSTRACT: The thermoluminescence of a cerium-containing silicate glass (53.6% SiO₂, 15.01% B₂O₃, 19.01% BaO, 5.6% K₂O, 2.4% Na₂O, 3.5% ZnO, 0.5% Sb₂O₃, 0.3% CeO₂) has been studied by the glow-curve method. This method can also be used to develop formulations for glass which would not exhibit thermoluminescence after irradiation with hard rays. Samples of the glass were irradiated with x-rays and then heated steadily to 350C at rates varying from 2 to 50C/min. A photomultiplier, a cathode follower, and a recording

Card 1/1

L 17738-63

ACCESSION NR: AP3007174

potentiometer were used. Readings were taken at regular intervals and plotted as the glow curves shown in Fig. 1 of the Enclosure. It was concluded that heating rate significantly affects the thermoluminescence intensity, the optimum rate being 20-30C/min. Orig. art. has: 1 figure.

ASSOCIATION: Saratovskiy filial Instituta stekla (Saratov Branch, Institute of Glass)

SUBMITTED: 00

DATE ACQ: 30Sep63

ENCL: 01

SUB CODE: PH

NO REF SOV: 003

OTHER: 000

Card 2/32

L 15275-65 EWP(e)/EWT(t)/EWP(b) Pq-4 AFWL/ASD(a)-5/ESD(gs)/ESD(t) WH

ACCESSION NR: AR4048477

S/0081/64/000/013/M011/M011

AUTHOR: Lipchanskaya, R.V., Aksenov, V.S.

TITLE: Dependence of light transmission through technical glass on temperature.

SOURCE: Ref. zh. Khimiya, Abs. 13M83

CITED SOURCE: Steklo Inform. materialy* Gos. n.-1. in-ta stekla, no. 4(121), 1963,
62-63

TOPIC TAGS: technical glass, glass optical property, light transmission, thermophoto-
metric measurement, ultraviolet light

ABSTRACT: The optical characteristics of industrial glasses at high temperatures were studied in an apparatus built on the basis of the SF-4 spectrophotometer. The cell of the SF-4 contained the thermo-equipment with heater, thermocouple, specimen and casing, cooled by running water. Curves were obtained, for a given wavelength, of the change in the passage of light through the glass, as related to temperature. It was concluded that the light transmissibility of industrial glasses decreases considerably under light at high temperatures, which renders them unsuitable for use at such temperatures.

Card 1/2

L 15275-65

ACCESSION NR: AR4048477

Various glasses differ in light transmissibility. I. Mikhaylova

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, GP

NO REF SOV: 000

OTHER: 000

Card 2/2

TSAREV, B.A.; BOGDANOV, L.M.; MARTYSH, G.G.; LIPCHANSKAYA, V.I.

Possibility of partial substituting of synthetic polymers
for gelatin in photographic emulsions. Tekh.kino i telev.
4 no.8:8-11 Ag '60. (MIRA 13:8)

1. Leningradskiy institut kinoinzhenerov.
(Photographic emulsions)

LIPCHENKO, V.D.; SLESAREVA, T.A.; SHURSHIKOVA, P.A.; SHUL'MAN, D.I.;
SMIRNOV, Ye.V.; KONOVALOVA, N.A.; PEN'KOV, Ye., red.; LEBEDEV,
A., tekhn.red.

[Collection of exercises in calculating industrial production
costs] Sbornik uprazhnenii po kal'kulirovaniu sebestoimosti
promyshlennoi produktsii. Moskva, Gosfinizdat, 1959. 207 p.
(MIRA 12:11)

(Costs, Industrial)

GRIGORENKO, N.P., zasl. vrach RSFSR, kand. med. nauk; LIPCHENKO, V.Ya., kand. med. nauk, otv. red.; LEONOV, A.N., dots., red.; KASATKIN, S.N., prof., zasl. doktor nauki RSFSR, prof., red.; POLYANTSEV, A.A., prof., zasl. doktor nauki RSFSR, red.

[Pathogenesis, clinical aspects, treatment and prevention of the most serious diseases; materials of the 21st scientific session] Patogenez, klinika, lechenie i profilaktika vazhneishikh zabolevanii; materialy 21-i nauchnoi sessii. Volgograd, 1963. 347 p. (MIRA 17112)

1. Volgograd. Meditsinskiy institut. 2. Zaveduyushchiy kafedroy obshchey khirurgii Volgogradskogo meditsinskogo instituta (for Polyantsev). 3. Zaveduyushchiy kafedroy normal'noy anatomii Belgogradskogo meditsinskogo instituta (for Kasatkin). 4. Kafedra normal'noy anatomii Volgogradskogo meditsinskogo instituta (for Grigorenko, Lipchenko).

LIPCHENKO, V.Ya.

Selection of an intestinal segment for revascularization of
the kidney by Pytel's method. Urologia no.4:17-21 '64.
(MIRA 19:1)

1. Kafedra normal'noy anatomii (zav. prof. S.N. Kasatkin)
Volgogradskogo meditsinskogo instituta.

LIPCHEV, G. Khr.; GEKOVA, K.

Method and diagnostic value of the Sagi-Pless test in neoplasms; preliminary report. Suvrem. med., Sofia 9 no.3:64-69 1958.

1. Iz okoliiskata bolnitsa --gr. Omurtag (gl. lekar: P. Iazov) I okal. sanepidstantsia-gr. Omurtag (gl. lekar: P. Rashev).

(NEOPLASMS, diag.

Sagi-Pless blood test (Bul))

LIPCHEV, G.; BOZHANCHEV, P.; IVANOV, Iv.

Cortisone-antibiotic therapy of influenza. Suvrem med., Sofia no.4:
63-66 '60.

L. Iz Obedinenata gradska bolnitsa, Omurtag (Glaven lekar: An.Krustev)
(INFLUENZA ther)
(CORTISONE ther)
(ANTIBIOTICS ther)

LIPCHEV, G.Kh.

On osteogenical dystrophy - Brugsen syndrome. Report of a case.
Suvrem med., Sofia no.11:112-117 '60.

1. Iz Obedinenata gradka bolnitsa, Omurtag (Gl. lekar A.Krustev)
(BONE DISEASES)
(GYNECOLOGY)

LIPCHIN, G.S., student IV kursa

Transistorised phase-shift register. Sbor.stud.nauch.rab.LNIS
no.1:78-82 '59. (MIRA 13:4)

1. Leningradskiy elektrotekhnicheskii institut svyazi imeni
prof. M.A.Bonch-Bruyevicha.
(Electronic calculating machines) (Pulse techniques(Electronics))

GOL'DENBERG, L.M., dots.; LIPCHIN, G.S., inzh.; OKUNEV, Yu.B., inzh.;
POLYAK, M.N., inzh.; RAKHOVICH, L.M., inzh.; VEYTSMAN, G.I.,
red.; ROMANOVA, S.F., tekhn. red.

[Digital differential analyzer] TSifrovoy differentsial'nyi ana-
lizator; informatsionnyi sbornik. - Moskva, Sviaz'izdat, 1962.
109 p. (MIRA 16:3)

1. Sotrudniki Leningradskogo elektrotekhnicheskogo instituta
svyazi imeni prof. M.A. Bonch-Bruyevicha (for Gol'denberg,
Lipchin, Okunev, Polyak, Rakhovich).
(Electronic differential analyzers)

1ST AND 2ND ORDERS																										PROCESSES AND PROPERTIES INDEX																									
CROSS ELEMENTS																										CROSS ELEMENTS																									
M																										N																									
<p>*A Study of Iron-Carbon-Aluminum Alloys. B. E. Nomin, N. N. Lipchin, and Yu. M. Margolin (<i>Kachestv. Stal (Alloy Steels)</i>, 1936, (9), 22-27). [In Russian.] Alloys were prepared containing 0.06-1.2% carbon and 4-18% aluminum, and their structure, hardness, electrical resistance, and magnetic properties were studied. The results are given in a long abstract in <i>C. Abs.</i>, 1936, 26, 5922. —N. H. V.</p>																																																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																																																			
1ST AND 2ND ORDERS																										PROCESSES AND PROPERTIES INDEX																									
CROSS ELEMENTS																										CROSS ELEMENTS																									

PROCESSING AND PROPERTY INDEX

10

5

ISOHERMAL ANNEALING OF TOOL STEEL. A. N. Alimov, N. N. Lipchin and N. F. Sivkov. (Kataheavennia Stal, 1937, No. 2, pp. 37-40). The authors have investigated the possibility of replacing the usual annealing of special steels—(1) 2.34% carbon, 12% chromium; (2) 1.41% nickel, 0.42% molybdenum; (3) 1.20% chromium, 1.70% tungsten; (4) 2.63% chromium, 8.40% molybdenum, 0.33% vanadium; and (5) 3.00% chromium, 17.5% tungsten—which requires about 36 hr., by the much quicker isothermal annealing. They found that by a suitable adjustment of the heating and of the "quenching" temperature, each of these steels could be annealed completely (i.e., to Brinell hardness 220-240) in less than 6 hr. For steel (1), for instance, the method consists in heating to 800° (which requires 8 hr.), keeping this temperature for 1-1.5 hr., cooling quickly (in the opened furnace) to 700° C., and holding at this temperature for 3 hr. For steels (2) and (3), the temperature at which the austenite decomposes most rapidly is 650-660° C., for steels (4) and (5) 720° C. (In Russian).

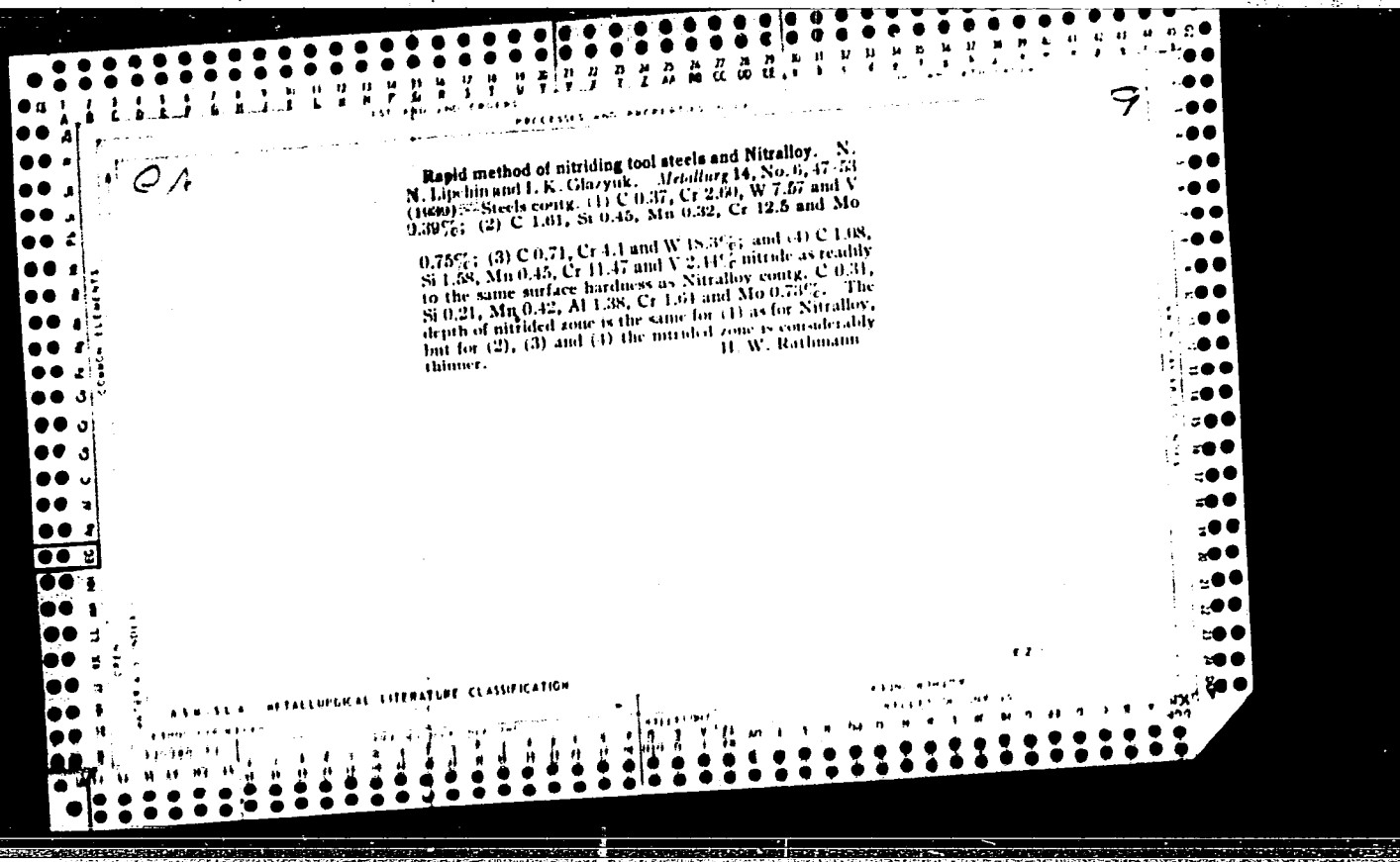
ASB. S. A. METALLURGICAL LITERATURE CLASSIFICATION

SIGNATURE

SIGNATURE

PROCESSES AND PROPERTIES																									
<p><i>ck</i></p> <p>Determination of grain size in 12% chromium steel with or without the addition of molybdenum. N. N. Lipchin. <i>Kachshennaya Stal</i> 5, No. 2, 54(1937); <i>Chem. Zentr.</i> 1937, II, 657. The McQuaid-Rhn method (cf. C. A. 10, 1730, 3850) is not suitable for the detn. of grain size in steel contg. 12% Cr with or without Mo. It is recommended that the specimen be held at 1130° for 15 min., quenched in oil and then held at 540-60° for 1 hr. In this way a troostite network forms about the austenite grains. M. G. Moore</p> <p><i>9</i></p>																									
<p>ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION</p>																									

5	<p>10</p> <p>Welding Stresses and their Removal by Annealing. N. N. Lipchin, Vestnik Metallopromyshlennosti, 1939, No. 4, pp. 53-58. (In Russian). Some experimental results of measurements of stresses set up on welding in rings cut from cast 0-23% carbon steel cylinders are given. The rings were first annealed for 3 hr. at 1000° C. and then machined to 592 mm. in internal diameter, 60 mm. in height and 28 mm. in wall thickness. A groove was cut on the inside or outside of the rings. These grooves were of 100 mm. side and 3-25 mm. deep. They were then filled up with weld metal and the stresses set up were determined by measuring the deformation which occurred when the rings were cut at a point opposite the weld. It was found that welds on the inside of the ring caused compressive and grooves on the outside caused tensile stresses, which reached a maximum for a depth of groove equal to 50% of the wall thickness of the ring. Hammering of the welds reduced the stresses appreciably. The stresses could be almost completely removed by low-temperature annealing (630-650° for 1 hr.), the magnitude of the original stress being without any influence on the effectiveness of the annealing treatment.</p>	10
<p>145000 STAINLESS</p> <p>145000 GROUP</p>	<p>145000 STAINLESS</p> <p>145000 GROUP</p>	<p>145000 STAINLESS</p> <p>145000 GROUP</p>



1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p>5</p> <p>10</p> <p>The Isothermal Treatment of Alloy Tool Steel. A. N. Alimov, N. N. Lippin and N. F. Bivkov. (Iron and Steel Institute, 1945, Translation Series, No. 908). A translation is presented of a paper which appeared in <i>Katshentymnina Stal</i>, 1937, No. 2, pp. 37-40; this is an account of tests made on alloy steels for forging into tools with a view to reducing the time required for heat-treatment. The five steels used were: (1) A 12% chromium steel; (2) a low-alloy chromium-nickel-molybdenum steel; (3) a 1-20% chromium 1-70% tungsten steel; (4) an 8-40% tungsten 2-53% chromium 0-33% vanadium steel; and (5) a 17-5% tungsten 3-90% chromium steel. Satisfactory heat-treatments were developed which involved holding at 840-900° C. for 1-1½ hr. followed by holding at a subcritical temperature for not more than 4 hr. The total heat-treatment time was reduced by about 60% as compared with the former methods.</p> <p style="text-align: center;">Stal</p>																																																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																																																			
FROM SYNONYM																										TO SYNONYM																									
SYMBOLS																										SYMBOLS																									

LIPCHIN, N.N.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 363 - I

BOOK

Call No.: TN672.V8

Author: LIPCHIN, N. N.

Full Title: STUDY OF THE INFLUENCE OF BORON ON THE PROPERTIES OF
HIGH-SPEED CAST STEELS

Transliterated Title: Issledovaniye vliyaniya bora na svoystva
litoy bystrorezhushchey stali

Publishing Data

Originating Agency: All-Union Scientific Engineering and Technical
Society of Machine Builders. Urals Branch

Publishing House: State Scientific and Technical Publishing House
of Machine Building Literature ("Mashgiz")

Date: 1950

No. pp.: 8

No. of copies: 3,000

Text Data

This is an article from the book: VSESOYUZNOYE NAUCHNOYE INZHENERNO-
TEKHNICHESKOYE OBSHCHESTVO MASHINOSTROITELEY. URAL'SKOYE OTDELENIYE,
THERMAL TREATMENT OF METALS - Symposium of Conference (Termicheskaya
obrabotka metallov, materialy konferentsii) (p.351-358), see AID 223 II

Coverage: The economical and technological advantages of the use of
boron in high-speed cast steel tools are emphasized and
the results of the study are presented in abstract form

Issledovaniye vliyaniya bora na svoystva
litoy bystrorezhushchey stali

AID 363 - I

(6 charts). The studies are limited to boron content up to 1.3% for high speed cast steel of type PFI, EI-262 and carbon instrumental steels U7-U10. The effects of the presence of boron on heat treatments and particularly on the phase transformation are discussed. New methods of hot testing of high-speed steels are developed with the consideration of negative action of high temperatures and the effect on brittleness of steel. The best results were obtained with boron content up to 0.15 or 0.17% in the high speed cast steels PF1 and EI-262 in comparison with the forged steels. The cutting speed can be increased from 26% to 50%. 7 charts.

Purpose: For scientific workers

Facilities: None

No. of Russian and Slavic References: 5 Russian (1945-49)

Available: Library of Congress.

2/2

AUTHOR: Lipchin, N. N.

SOV/163-58-3-47/49

TITLE: The Proportional Limit in Compression as a Direct Characteristic Feature of High-Speed Tools (Predel proporsional'nosti pri szhatii kak kosvennaya kharakteristika staley dlya rezhushchego instrumenta)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 3, pp 273-278 (USSR)

ABSTRACT: In the present paper a method is described which is employed for the hot testing of high-speed tools, and at the same time also determines the strength and brittleness of the corresponding instruments. This method is based on the determination of the proportional limit in compressing the samples at given temperatures.

The determination of σ_p compr. is carried out by the machine constructed by the TsNIIITMASH -IM-4A.

The results presented in figure 2 give evidence as to the determination of the proportional limit at temperatures of up to 700°C for thermally treated samples of the high-speed tools R18, R9, EI, 184, and carbon steel U8. From the results obtained

Card 1/3

SOV/163-58-3-47/49

The Proportional Limit in Compression as a Direct Characteristic Feature of High-Speed Tools

may be seen that at a temperature of about 300° an intense decrease of the σ_p compr. of carbon steels begins.

σ_p compr. is different with high-speed tools in the case of different steel types and at temperatures above 600°.

Also the influence of the brittleness of the steels on the character of σ_p compr. in cast steel samples of the types R9

and R18 of different carbon content was investigated. The results obtained show that with an increase of the carbon or boron content the strength of the steel samples increases continuously. In the figures 3 and 4 the changes of the maximum strength R_c ,

the proportional limit σ and the cutting speed (v) are given as dependent on the carbon and boron content of the steels of the types R9 and R18. A decrease of σ_p compr. at a higher boron

content of the alloys leads to an increase of the brittleness of the steel samples due to an increasing formation of boron carbides. The method suggested for the determination of σ_p compr.

in the burning of the samples in hot state at 700° is also used

Card 2/3

SOV/163-58-3-47/49

The Proportional Limit in Compression as a Direct Characteristic Feature of High-Speed Tools

to determine the brittleness of the alloys.

The method devised makes it possible to characterize the cutting properties of the samples investigated, and to demonstrate the influence of the change of the chemical properties or thermal operation conditions.

There are 5 figures, 1 table, and 2 references, which are Soviet.

ASSOCIATION: Permskiy gos. universitet (Perm' State University)

SUBMITTED: October 1, 1957

Card 3/3

81544

SOV/137-59-5-11408

12.7100

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 275
(USSR)

AUTHORS: Stenkin, P.A., Lipchin, N.N.

TITLE: Application of High Heating Temperatures in Isothermal Quench-
Hardening of Carbon Tool Steel

PERIODICAL: Prom.-ekon. byul. Sovnarkhoz Permsk. ekon. adm. r-na, 1958,
Nr 9, pp 7 - 11

ABSTRACT: To increase stability of supercooled austenite within the range of perlite and intermediate transformations, heating for quench-hardening was carried out to higher temperatures. To avoid grain growth at high temperatures the rate of heating must exceed the rate of grain growth. Specimens of U8 steel of 10 mm cross section were heated in a salt bath at 1,000°, 1,100° and 1,200°C, were held for different lengths of time and were then quenched in oil heated to 130°C. The best results in quench-hardening were obtained after speeded-up heating in a salt bath, holding at 1,200°C for 3 sec, for 6 sec at 1,100°C and for 10 sec at

Card 1/2

81544

SOV/137-59-5-11408

Application of High Heating Temperatures in Isothermal Quench-Hardening of Carbon Tool Steel

1,000°C. Then, isothermal holding in hot oil for 7 - 10 min and air cooling followed. Isothermal quench-hardening was followed by tempering at 180 - 200°C in hot oil. In comparison to water-quenching the described isothermal quench-hardening method reduces deformation by a factor of 8 - 10, ensures high quality of the parts and extends the range of application of carbon steel for various parts and instruments. ✓

A.B.

Card 2/2

SOV/129-59-2-13/16
AUTHOR: Lipchin, N.N. Candidate of Technical Sciences
TITLE: Reducing the Deformation of Tools During Hardening
(Ponizheniye deformatsii instrumentov pri zakalke)
PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov,
1979, Nr 2, pp 50 - 59 (USSR)
ABSTRACT: The author investigated the conditions of hardening of
tools made of the steels R18, R9, KhVG, U8-U12 which would
ensure minimum deformation and warping. On the basis of
the obtained results, the following conclusions are
arrived at.
1) For reducing the deformation during hardening, tools
made of the carbon steels U8-U12 should be quenched in a
35-45% aqueous solution of sodium hydrate at 20 °C.
Tools made of the steel KhVG should be hardened and iso-
thermally heated in the martensite range at 160 °C in
alkalis or saltpetre for 3-6 min or at 110 °C in a
75% aqueous solution of sodium hydrate for a duration of
10-15 min.
2) High-speed steel tools of shapes which are prone to
warping should be hardened and isothermally heated in the
Card1/2 range of martensite transformation at 170-180 °C for

SOV/129-59-2-13/16

Reducing the Deformation of Tools During Hardening

4-12 minutes in saltpetre or in alkalines.

There are 7 figures, 2 tables and 3 Soviet references.

ASSOCIATION: Permskiy gosudarstvennyy universitet
(Perm' State University)

Card 2/2

SOV/129-59-5-16/17

AUTHORS: Lipchin N.N. (Cand. Tech. Sciences) and Sten'kin P.A.
(Engineer)

TITLE: Isothermal Quenching of Carbon Steels from High Heating
Temperatures (Izotermicheskaya zakalka uglerodistykh
staley s vysokikh temperatur nagreva)

PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov,
1959, Nr 5, pp 59-60 (USSR)

ABSTRACT: Isothermal quenching of complicated carbon steel tools
from currently used heating temperatures reduces deformation
considerably but it cannot be used in practice since it does not
ensure the required high hardness. Therefore, for manufacturing
tools of complex shape, alloy steels are used instead of carbon
steels. The tools are subjected to ordinary hardening and then they
are tried. For increasing the stability of super-cooled austenite
of carbon steels in the range of perlitic and intermediate
transformations the authors heated the specimens for hardening
to more elevated temperatures so that they could apply heated
media for cooling. The curve, Fig 1, shows the influence of the
heating temperature of 5 mm diameter U7 steel specimens on the
hardness in the case of

Card 1/4

SOV/129-59-5-16/17

Isothermal Quenching of Carbon Steels from High Heating Temperatures
quenching in oil heated to 1400°C. However, the properties of steel are influenced not only by the temperature but also by the speed of heating and the duration of maintaining the specimen at the given temperature. To avoid grain growth at elevated temperatures it is necessary to apply a heating speed which is slightly higher than the speed of grain growth. This condition can be fulfilled for some tools in the case of heating in ordinary salt baths. The dependence of the change in hardness of the core of a 10 mm diameter U8-steel specimen on the duration of heating at 1000, 1100 and 1200 °C with subsequent quenching in oil heated to 130°C is graphed in Fig 2. A hardness of 60 R_c can be obtained by heating with a speed of 400°C/sec to 1200°C, 200°C/sec to 1100°C and 100°C/sec to 1000°C and holding the components at these temperatures for 0.5, 1 and 1.5 min respectively. The authors established that the heating duration of components for each 1 mm of the cross-section in the case of heating in a salt bath should be 3 sec for 1200°C, 6 sec for 1100°C and 10 sec for 1000°C.

Card 2/4 Investigations have shown that if such a regime is applied, the hardened specimens and tools will conserve

SOV/129-59-5-16/17

Isothermal Quenching of Carbon Steels from High Heating Temperatures
a fine grain structure. An appreciable growth of the grain was observed only in the case of 3- to 4-fold increases of the heating durations compared to those graphed in Fig 2. The deformation during hardening was measured on French type ring specimens. Thus, in the case of quenching such specimens in water after heating for 0.5 min at 1200°C, the deformation between the reference points was 0.37 mm whilst in the case of quenching in oil heated to 130°C, the corresponding deformation was 0.4 mm, i.e. 9 times lower. The hardness was 60 to 62 R_{Co}. In the Perm' Machinery Works' Introduction of the method of isothermal hardening in heated oil after accelerated heating to elevated temperatures had eliminated completely rejects due to cracks in the manufacture of blades of metal cutting machines. Originally the number of rejects reached up to 30%. The here-described method is likely
Card 3/4 to be extensively used for hardening of small carbon

SOV/129-59-5-16/17

Isothermal Quenching of Carbon Steels from High Heating Temperatures

steel components and tools of complex shape which are
prone to crack formation and warping.

There are 2 figures.

Note: This is a complete translation.

ASSOCIATION: Permskiy gosudarstvennyy universitet i Permskiy
zavod torgovogo mashinostroyeniya (Perm' State
University and Perm Works for Consumer Goods Machinery)

Card 4/4

005/06

S/148/60/000/005/006/009

187100

AUTHORS: Lipchin, N.N., Sobolev, Yu.A.

TITLE: The Effect of Superheat on Steel Properties

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya,
1960, Nr 5, pp 135 - 141

TEXT: Recent publications contain data on the use of high temperature heating in order to intensify various heat treatment processes [Refs 1, 2, 3]. For the purpose of introducing superheat to intensified heat and chemical heat treatment processes it is necessary to establish the admissibility of coarse-grained structure for machine parts with such defects as naphthalene-like and stony fractures. The authors present results of investigations into properties of two standard structural steel grades, namely 40⁸ and 34XHM¹⁸ (34KhN3M) steel, with the use of metallographical and dilatometrical analyses; the specimens were subjected to tests after various heat treatment conditions. The individual experiments were made at UZTM with the participation of P.A. Sklyuyev, Candidate of Technical Sciences. It was established that the degree

Card 1/3

3556

The Effect of Superheat on Steel Properties

S/148/60/000/005/006/009

of the effect of preliminary superheating depended on a series of factors such as: alloyage of the steel; thickness of the original blank; degree of forging reduction; the temperature range of pressure working; conditions of subsequent cooling, subsequent heat treatment etc. Therefore the problem of admissible superheat must be solved by taking into account the combination of above-mentioned factors and the final results of mechanical properties at temperatures below zero. The main deficiency of coarse-grained superheated steel is its concentrational heterogeneity, reduced ductile properties and the shift of the cold brittleness range toward the positive temperatures of the tests. To obtain corrected structures and recovered ductile properties, independent of the nature of fracture (either naphthalene-like or stony), it is necessary to carry out homogenizing annealing at temperatures which are slightly above the additional range of phase transformation in zones enriched with admixtures. The subsequent phase recrystallization (normalization or quench hardening) ensures the grain refinement and adequate mechanical properties after appropriate tempering.

Card 2/3

30596

The Effect of Superheat on Steel Properties

3/148/60/000/005/006/009

There are: 3 sets of photographs, 1 set of microphotos, 1 table, 3 graphs
and 5 Soviet references.

ASSOCIATION: Permskiy gosudarstvennyy universitet (Perm' State University)

SUBMITTED: July 27, 1959

LIPCHIN, N.N., kand.tekhn.nauk

Transformations during heating. Metalloved. i term. obr.met.
no.6:44-48 Je '61. (MIRA 14:6)

1. Permskiy politekhnicheskii institut.
(Steel--Metallography)
(Phase rule and equilibrium)

LIFCHIN, H.N.; TASKAYEV, I.P.

Deep desulfurization of steel by hydrogen (see also 141-142)
(see also 141-142)

1. Possibly considered by hydrogen treatment
(Steel--Heat treatment)
(Hydrogen)

S/129/63/000/003/002/009
E111/E351

AUTHORS: Lipchin, N.N. and Kokovyakina, S.A.

TITLE: Mechanisms of recrystallization during the heating of steel 4X13 (4Kh13)

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1963, 6 - 12

TEXT: It is assumed, in a proposed explanation for the recrystallization of steel by heating, that the austenite produced retains phase work-hardening up to temperatures considerably higher than the phase-transformation range; subsequent recrystallization leads to the appearance of the new, fine grains normally found in the fracture after cooling from higher temperatures. The present investigation was carried out as part of a programme aimed at clearing up certain obscurities in this scheme by studying the phase recrystallization of several hypo- and hypereutectoid steels and carbon-free iron alloys of varying composition. The authors conclude that the precipitation from the solid solution of a dissociation-stable excess phase increases the temperature from which quenching produces a finer grain in fracture. When the excess

Card 1/2

S/129/63/000/003/002/009
E111/E351

Mechanisms of

phase has a high dissociation temperature the new fine grains, produced as a result of phase transformation, have time to grow to considerable dimensions; the grain is not refined further on repeated heating. With increasing rate of heating of steel 4Kh13 the temperature at which solution of excess carbides and grain-refinement occurs rises. Correction of grain coarseness is obtained by quenching from 1 075 °C, tempering at 700 °C for 4 hours and repeated quenching and tempering under the usual conditions for this steel. There are 9 figures and 1 table.

ASSOCIATION: Permskiy politekhnicheskii institut
(Perm Polytechnical Institute)

Card 2/2

LIPCHIN, N.N.; KRYUKOVA, T.G.; OSLON, N.L.

Effect of the rate of heating on the phase recrystallization
of hardened 60C2 steel. Metalloved. 1 term. obr. met. no.8:
5-8 Ag '64. (MIRA 17;10)

1. Permskiy politekhnicheskii institut.

LIPCHIN, N.N. (Perm'); OSLON, N.L. (Perm'); SHUBIN, V.N. (Perm');
KHUDEN'KIKH, V.P. (Perm')

Effect of vanadium on the phase recrystallization of steel. Izv. AN
SSSR. Met. no.3:140-145 My-Je '65. (MIRA 18:7)

L 52239-65 EPF(n)-2/EWA(c)/EWT(m)/EWP(b)/T/EWA(d)/EWP(w)/EWP(t) Pu-4 IJP(c)
JD/JG

ACCESSION NR: AP5008389

S/0148/65/000/003/0146/0151

AUTHOR: Lipchin, N. N.

TITLE: Effect of the second phase on the structural mechanism of austenite grain formation

SOURCE: IVUZ. Chernaya metallurgiya, no. 3, 1965, 146-151

TOPIC TAGS: austenite, iron alloy, phase analysis, hypereutectoid steel

ABSTRACT: Iron alloys with and without carbon and variously alloyed hypoeutectoid and hypereutectoid steels were investigated in order to explain the effect of the structural state of the ferrite matrix and the carbide phase on austenite grain formation and to obtain a fine-grained fracture surface. In pre-quenched steels the ferrite-to-austenite transformation and solution of carbides at constant rate of slow heating is first accelerated, then retarded, ending at a higher temperature than after annealing. Different heating rates and secondary quenching temperatures were used to determine the effect of carbon in the steel on the heating temperature at which the transformation is complete and solution of the basic mass of carbide particles and also the temperature of the formation of polyhedral grains revealed in fracture. Considerable attention is given to steels alloyed with vanadium and

Card 1/2

L 52239-65

ACCESSION NR: AP5000389

molybdenum¹ and containing 0.4% C. The higher the molybdenum and vanadium content, the greater the spread between A₃ and the temperature ensuring solution of carbide particles and formation of polyhedral grains. Uneven austenite grain growth in the slow heating of pre-quenched steel is explained by the formation of fine grains in regions of more dispersed and simple carbides which tend to coarsen with continued slow heating while the excess in other regions retards the formation of polyhedral grains. This coarsening is very noticeable in vanadium steels in which carbide² particles vary greatly in size. Under conditions of rapid heating, however, vanadium carbides from martensite remain very dispersed and dissolve at a lower temperature than in slow heating. Orig. art. has: 5 figures

ASSOCIATION: Permskiy politekhnicheskiy institut (Perm Polytechnical Institute)

SUBMITTED: 14Oct64

ENCL: 00

SUB CODE: MM

NO REF SOV: 007

OTHER: 000

Card 2/2746

LIFCHIN, N.N.; BELYKH, Yu.A.; YARCHOV, V.M.

Phase recrystallization of steels alloyed with molybdenum.

Metalloved. 1 term. obr. met. no.4:17-22 Ap '65.

(MIRA 18:6)

1. Permskiy politekhnicheskii institut.

L 32974-66 EWT(m)/I/EWP(w)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6017520

SOURCE CODE: UR/0148/66/000/001/0136/0140

AUTHOR: Lipchin, N. N.

ORG: Perm Polytechnical Institute (Permskiy politekhnicheskiy institut)

TITLE: γ -phase formation in initially quenched iron and alloyed ferrite

SOURCE: IVUZ. Chernaya metallurgiya, no. 1, 1966, 136-140

TOPIC TAGS: austenitic transformation, crystal lattice deformation, diffraction analysis, metallographic examination, martensitic transformation, carbide phase, iron, ferrite

ABSTRACT: The effect of initial martensitic structure in technical iron and alloyed ferrite on the formation of γ -phase grain structure was studied. After quenching from different temperatures, above and below the α - γ line, profiles of (220) diffraction lines were compared. For fully martensitic structures, the doublet merged into a single wide line. Microstructures and hardnesses of technical iron and Fe + 2.82% Mn for different quench temperatures. The hardness differences between quenched ferrite (quench temperature--920°C) and martensite (quench temperature--1400°C for iron and 1300°C for alloyed ferrite) were about 200 HV. Debye x-ray rings of (211) lines were displayed adjacent to fractured bars of the two materials after different quenching treatments. Martensitic structures showed widely separated spots on the Debye circles, while after

UDC: 669.12:620.183.48

Card 1/2

L 32974-66

ACC NR: AP6017520

tempering for three hours at 700°C the K_{α} -doublet (220) was clearly split. Only after quenching the iron from 910°C, and the Fe + 2.82% Mn alloy from 850°C did the diffraction spots appear hazy, forming a continuous Debye circle. This behavior was related to the formation of new small grains of γ -phase, having their own specific orientations and this was verified by the fine grains appearing in the fracture surfaces. The microstructures indicated that the γ -phase appearance at the α - γ point was highly discontinuous with needle and polyhedral shapes forming together. A varied grain structure was also observed in a 0.025% C and 0.56% V steel after being initially quenched from 1300°C and heated to just below the α - γ transformation temperature. Recrystallization was observed to occur as a result of the internal deformation imparted during the quench. Orig. art. has: 4 figures.

SUB CODE: 11/

SUBM DATE: 21Nov64/

ORIG REF: 004

Card 2/2 *LLB*

ACC NR: AP6034782

SOURCE CODE: UR/0148/66/000/008/0152/0156

AUTHORS: Lipchin, N. N.; Kokoviyakina, S. A.; Shubin, V. N.

ORG: Perm Polytechnic Institute (Permskiy politekhnicheskiy institut)

TITLE: Peculiarities of recrystallization of alloy EI437B

SOURCE: IVUZ. Chernaya metallurgiya, no. 8, 1966, 152-156

TOPIC TAGS: alloy, plastic deformation, crystal lattice deformation, metal crystallization, crystallization, nonuniform grain size, grain size/ EI437B alloy

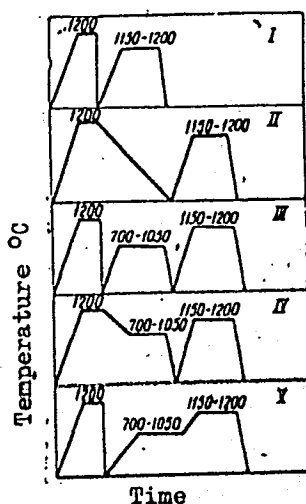
ABSTRACT: The grain sizes and uniformity in alloys for high-temperature use are discussed. The opinions of investigators on the causes of nonuniformity of grain are varied. The purpose of this study is to investigate the effect of admixture phases of an alloy and plastic deformation on the character of grain growth, and also to clarify the simultaneous effect of these factors on the structure formation of alloy EI437B. For studying the role of dispersed phases, specimens of the alloy were prepared by thermal process according to the 5 procedures shown in Fig. 1, where time and treatment temperature for each of the five are shown. The method of cold deformation was applied to the study of grain size behavior in deformation. Micro- and macro-structure photographs of test specimens are presented, and analysis is made of the joint variation of grain diameter, annealing temperature, and percentage of recrystallization of alloy EI437B. The authors conclude that the nonuniform grain

Card 1/2

UDC: 669.14.018.45:620.181.4

ACC NR: AP6034762

Fig. 1. Diagrams of heat processing of the alloy EI437B



structure in EI437B can occur independently of deformation in the process of secondary recrystallization caused by nonuniform mixing of admixture phases. Conditions of separation and mixing of dispersed phases determine the character of grain growth during thermal processing. Varied graininess in the deformed alloy is conditioned not only by secondary recrystallization, but also by zonal grain embrittlement in regions exposed to critical degrees of deformation. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 12Jul65/ ORIG REF: 005
Card 2/2

PARFENT'YEV, A.A.; LIPCHIN, TS.N.

Some problems in the technology of the manufacture of miniature
electric motors. Av.prom. 26 no. 3-7 Ag '57. (MIRA 15:4)
(Electric motors—Design and construction)

WIPCHIN, S.

First voyage of the atomic ship "Lenin." IUn.tekh. 4 no.11:15-20
N '59. (MIRA 13:4)
(Atomic ships)

LIPCHIN, S.

Young technicians' contribution to the seven-year plan. IUn.
tekhn. 4 no.3:6-12 Mr '60. (MIRA 13:6)
(Students' activities)

LIPCHIN, S.

Five Volkhov electric power stations in one unit.
IUn.Tekh. 4 no.5:6 My '60. (MIRA 13:7)
(Turbogenerators)

ACC NR: AP6036406

SOURCE CODE: UR/0148/66/000/011/0113/0117

AUTHOR: Kidin, I. N.; Lipchin, T. N.; Ryabov, Ye. S.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splanov)

TITLE: Investigation of effect of the electrothermal treatment on the mechanical properties of 40KhN steel

SOURCE: IVUZ. Chernaya metallurgiya, no. 11, 1966, 113-117

TOPIC TAGS: steel, structural steel, low alloy steel, high strength steel, electrothermal treatment, cyclic electrothermal treatment, steel property/40KhN steel

ABSTRACT: Specimens of 40KhN steel (0.42% C, 1.02% Cr, 1.29% Ni, 0.41% Mn) wire annealed at 850C furnace cooled at 900C and air cooled were subjected to cyclic heat treatment (CHT): heated electrically at a rate of 50 deg/sec to the austenitizing temperature (870C), air cooled at a rate of 50 deg/sec to 650 or 450C and held at these temperatures for 30 and 200 sec, respectively, after which the cycle was repeated. After two cycles (experimentally determined to be the optimum number of cycles), the specimens were reheated to the austenitizing temperature, water quenched, tempered and tested for mechanical properties. The tests showed that CHT improves significantly the strength and ductility (Fig. 1), especially those of air-cooled wire. The strength of furnace-cooled wire was slightly lower and the ductility higher, probably because of a different amount of structurally free ferrite. Iso-

Card 1/3

UDC: 669.15-194 : 669.26'24 : 621:785.545 : 620.17

ACC NR: AP6036406

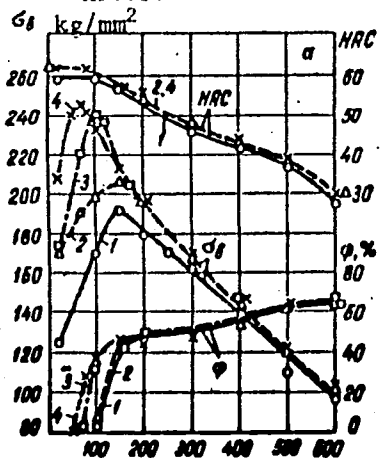


Fig. 1. Tempering temperature dependence of the hardness (RC), tensile strength (σ_B) and reduction of area (ψ) of air-cooled 40KhN steel wire conventionally hardened with furnace (1) or electrical (2) heating or hardened after two (3) or five (4) CHT cycles.

Tempering temperature, C

thermal decomposition of austenite at a lower temperature (450C) resulted in higher strength than decomposition of austenite at 650C, which can be explained by the coarser decomposition products. Higher mechanical properties obtained with two-cycle CHT of 40KhN steel can be explained by the martensite inhomogeneity associated with nonuniform distribution of carbon. Analogous high mechanical properties were obtained with high-temperature thermomechanical treatment of 40KhN steel. Similar

Cord 2/3

ACC NR: AP6036406.

results were obtained with CHT of St.40, St.60, 40Kh and 40KhNMb structural steels.
Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 11Oct65/ ORIG REF: 005/ OTH REF: 001/ ATD PRESS: 5107

Card 3/3

ACC NR: AP6036407

(A,N)

SOURCE CODE: UR/0148/66/000/011/0118/0122

AUTHOR: Kidin, I. N.; Lipchin, T. N.; Ryabov, Ye. S.

ORG: Moscow Institute for Steel and Alloys (Moskovskiy institut stali i splanov)

TITLE: Preliminary thermomechanical treatment of structural steels

SOURCE: IVUZ. Chernaya metallurgiya, no. 11, 1966, 118-122

TOPIC TAGS: structural steel, high strength steel, austenitic steel, thermomechanical treatment, steel strain hardening, strain hardening effect

ABSTRACT: Fully annealed low-alloy 40KhN (0.42% C, 1.02% Cr, 1.29% Ni) and 40KhNM (0.42% C, 1.05% Cr, 1.27% Ni, 0.27% Mo) steel wires were cold drawn with a reduction of 75% to a diameter of 2 mm, austenitized at 840C or 870—880C for 30 min in a vacuum furnace, water quenched and tempered at 100—400C for 1 hr. It was found that cold working after annealing and prior to hardening increased significantly the strength without lowering the ductility (see Fig. 1). Intermediate annealing of the cold drawn wire at 500C for 2 hr did not eliminate the strengthening effect of cold drawing. This effect was not eliminated even by high-temperature (850—900C) annealing 4 to 6 times followed by furnace or air cooling. Similar results were obtained with St.40, St.60, U8, U10 tool steels and 40Kh5 steel. The "inheritance" of the austen-

Card 1/2

UDC: 669.15—194 : 669.26'24'28 : 621.785

ACC NR: AP6036407

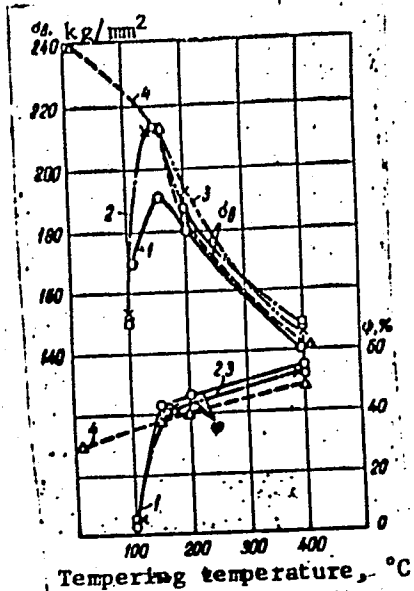


Fig. 1. Mechanical properties of 40KhN steel

the defects by martensite can be explained by the unchanged position of closely located atoms during martensitic transformation, although the lattice geometry is wholly changed. Orig. art. has: 4 figures.

SUB CODE: 11/ SUBM DATE: 09Apr66/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 5107

Card 2/2

ZHIVOPISTSEV, V.P.; SELEZNEVA, Ye.A.; LIPCHINA, A.P.; BRAGINA, Z.I.

Antipyrine dyes as analytical reagents. Report No. 3: Photometric
determination of zinc. Zhur. anal. khim. 21 no. 1:28-33 '66
(MIRA 19:1)

1. Permskiy gosudarstvennyy universitet imeni Gor'kogo.

CA 11H

PROCESSES AND PROPERTIES INDEX

The specificity of the action of thyroxine on the feathering of birds. B. ZAVADOVSKII AND L. LIPCHINA. *Zhur. appl. Biol. Med.* 13, 58-62(1929).—Addn. of meat to the usual seed diet inhibits the new growth of feathers plucked before the expt. This, however, does not influence any of the specific symptoms of the thyroid hormone, such as increased growth rate, depigmentation of the wings or the alteration of the color of the neck feathers in the hen. This is offered as evidence that meat feeding has nothing in common with the thyroxine effect. Wetting with alc. of the plucked area does not bring on in chickens the depigmentation effect of the thyroid. S. MORGULIS

COMMON ELEMENTS

NATURAL INDEX

ASB-ILA METALLURGICAL LITERATURE CLASSIFICATION

11240 834174

11240 834174

CA 11 E

Dependence of the process of metamorphosis of axolotls upon conditions of age, color and sex. L. P. LIRCHINA. *Zhur. ekspl. Biol. Med.* 13, 73 8(1979).--The rate of metamorphosis of axolotls under the influence of thyroid hormone depends upon the age of the animal, those 6 months old and weighing 6-9 g. being the most favorable, but with optimum concns. of the hormone even 10-months-old animals are suitable. Axolotls only 3 months old are less desirable because their tissues are immature; neither are the older animals desirable because their tissues are inert. No relationship was found between the color and sex of the animals and the rate of metamorphosis. There are considerable individual variations in the speed of the reaction to thyroid stimulation.

S. MOROULIS

ASB-5L-A METALLURGICAL LITERATURE CLASSIFICATION

LIPCHINA, L. P.

42727. SMIRNOV, L. I. i LIPCHINA, L. P. Gistogenez Nevrinom V Svete IKH Izucheniya Metodom Tkanevykh Kul'tur. Trudy In-ta Neyrokhirurgii Im. Burdenko, T. I, 1948, s. 9-20.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

1949, p. 5.

Lipchina, L. P. and Smirnov, L. I. - "Pathological anatomy of residual conditions after trauma of the peripheral nerve trunks," In symposium: VIII Sessiya Neyrokhirurg. soveta i Leningr. in-ta neyrokhirurgii, (Akad. med. nauk SSSR), Moscow, 1948, p. 152-66

SO: U-3600, 10 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).

LIPICHINA, L.P.

Histomical study on glycogen content in arachnoid endothelioma.
Vopr. neirokhir. 16 no. 3:30-35 May-June 1952. (CIAML 22:5)

1. Of the Pathologico-Anatomic Division (Head -- Prof. L. I. Smirnov, Corresponding Member AMS USSR), Institute of Neurosurgery imeni Academician N. N. Burdenko (Director -- Prof. B. G. Yegorov, Corresponding Member AMS), Academy of Medical Sciences USSR.

LIPCHINA, L. P.

Dissertation: "Study of Neuroectodermal Tumors in Tissue Cultures." Dr Biol Sci,
Acad Med Sci USSR, 15 Jun 54. (Vechernyaya Moskva, Moscow, 7 Jun 54)

SO: SUM 318, 23 Dec. 1954

AUTHORS: Emanuel', N. M., Lipchina, L. P. SOV/20-121-1-40/55

TITLE: Leucosis in Mice and Some Characteristic Features of Its Development Under the Action of Certain Inhibitors of Oxidizing Chain Processes (Leykoz u myshey i osobennosti yego razvitiya pri vozdeystvii ingibitorov tsepnykh okislitel'nykh protsessov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 1, pp. 141 - 144 (USSR)

ABSTRACT: The progressive development process of a malignant ulcer is very similar to the course of a unsteady chemical process, e.g. of the branched chain reactions (discovered by N.N.Semenov, Ref 1). It is possible that the observed similarities are based upon the similarity of the nature of the active intermediate substances responsible for the self-accelerating type of processes in vivo and in vitro. The active centers of the chain reactions yield the free radicals. In the slowly progressing (not explosive) branched chain reactions furthermore intermediate substances are formed which decompose sometimes under formation of free radicals. Consequently degenerated (retarded) ramifications are formed and the process is only to a small

Card 1/4

Leucosis in Mice and Some Characteristic Features of SOV/20-121-1-40/55
Its Development Under the Action of Certain Inhibitors of Oxidizing Chain
Processes

extent accelerated with respect to time. Certain data exist on the fact that the free radicals and the chain reactions play a rôle (Ref 2) in the mechanisms of several biochemical processes. It is especially important that the reactions of a biological (fermentative) oxidation which produce the energy necessary for the growth of the malignant ulcer are considered from this point of view. We may also assume that the free radicals in the biosubstrate stimulate the radical (chain-) reactions and thus represent in many cases the mechanism of cancer formation. A number of proofs of this assumption is given. All this leads to the conclusion that it might be expedient to act upon the malignant ulcers by the introduction of substances which react easily with free radicals (chain breakers). Strong, non-toxic inhibitors of the oxidizing chain reactions (nutrition antioxidants): I) Butyloxy-anisol (isomeric mixture); II) Ionol (2,6-di-tert. butyl-4-methyl phenol); III) Propyl gallate and others were tested by the authors as such substances. Leucoses with acute course which can be re-inoculated (pervivayemye) were used as disease

Card 2/4

Leucosis in Mice and Some Characteristic Features of Its Development Under the Action of Certain Inhibitors of Oxidizing Chain Processes SOV/20-121-1-40/55

in mice suffering from severe leucosis of the line afb, race \mathcal{N} IV, and in the mice of the line C_{57} , race \mathcal{N} A which were practically immune from leucosis. The latter was achieved by the re-inoculation of leucosis which was caused in the C_{57} mice by x-ray irradiation. The healthy control animals did not show dyspepsy or other pathological changes after a single administration of the preparation. In the afb mice which were 8 weeks old a prolongation of life and a healing of the leucosis process was observed. After 14 days the blood was completely normalized. The cured mice were immune from further leucosis inoculations. If the above mentioned facts turn out to be right we may expect that the class of chemotherapeutics will be effective in a vast range of malignant ulcers. Ye.Ye.Pogosyants (Institute of Experimental Pathology and Cancer Therapeutics, Academy of Medical Sciences USSR = Institut eksperimental'noy patologii i terapii raka AMN SSSR) placed specimens suffering from leucosis at the author's disposal. There are 3 figures and 5 references, 4

Card 3/4

Leucosis in Mice and Some Characteristic Features of SOV/20-121-1-40/55
Its Development Under the Action of Certain Inhibitors of Oxidizing Chain
Processes

of which are Soviet.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of
Chemical Physics, AS USSR) Laboratoriya anizotropnykh struktur
Akademii nauk SSSR (Laboratory of Anisotropic Structures AS
USSR)

PRESENTED: May 6, 1958, by N.N.Semenov, Member, Academy of Sciences, USSR

SUBMITTED: May 5, 1958

1. Leukemia--Therapy
2. Cancer research--USSR
3. Chemotherapeutic agents--Development
4. Chemotherapeutic agents--Materials
5. Chemotherapeutic agents--Test results

Card 4/4

17(3)

AUTHORS:

Emanuel', N. M., Corresponding Member, SOV/20-124-5-56/62
AS USSR, Lipchina, L. P., Pelevina, I. I., Lipatova, T. Z.

TITLE:

The Selective Inhibition of the Activity of Reduction-Oxidation
Enzymes in Tumoral Cells When Acted Upon With Inhibitors of
Chain Reactions (Izбирatel'noye podavleniye aktivnosti
okislitel'no-vosstanovitel'nykh fermentov v opukholovyykh
kletkakh pri vozdeystvii inhibitorov tshepnykh reaktsiy)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 5, pp 1157-1159
(USSR)

ABSTRACT:

Since many years the idea of a selective inhibition of
fermentative processes in tumoral cells, as a rational
principle in cancer chemotherapy, focuses the interest of the
scientists (Ref 1). The first two authors (Ref 2) proved an
inhibition and a retrogression of leucosis in mice under the
action of non toxic inhibitors of the oxidative chain reactions
(butyl-oxy-anisole, ionone, propyl gallate)(Ref 2). There were
reasons (the radical mechanism of the reduction-oxidation
processes) for assuming that the inhibition mentioned in the
title is one of the reasons of the tumor inhibiting effect of
the mentioned substances. This disturbs the formation processes
of some energy-rich compounds which are necessary for the

Card 1/3

The Selective Inhibition of the Activity of
Reduction-Oxidation Enzymes in Tumoral Cells When Acted Upon With Inhibitors
of Chain Reactions

SOV/20-124-5-56/62

intense biosynthesis in the neoplastic growth. In the present paper results could be obtained which confirm the above assumption. The authors investigated enzymes of the succinoxidase system. The ascitic cancer of Ehrlich (Erlikh) in mice, leucosis of black mice (line C-57, strain LA), acridine sarcoma of mice and the Braun-Pirs tumor of rabbits served for the experiments. Cells of the ascitic cancer as well as tumoral tissues of other new formations reduced to small pieces were incubated for 30 minutes in 0.75, 0.15 and 0.075% propyl gallate solution. These concentrations inhibit the activity of succine dehydrogenase in the cells of all tumors investigated (Figs 1, 2). The activity of this enzyme is not suppressed in healthy liver and spleen cells by propyl gallate solutions of 0.15 and 0.075% (Figure 3). Incubation in a 0.75% solution is, however, inhibiting. This inhibition is reversible in afflicted as well as in sound cells. The differences in the propyl gallate effect on the reduction-oxidation processes in normal and tumoral cells are probably due to a different permeability of the cells and their components (e.g. mitochondria)

Card 2/3

The Selective Inhibition of the Activity of
Reduction-Oxidation Enzymes in Tumoral Cells When Acted Upon With Inhibitors
of Chain Reactions

SOV/20-124-5-56/62

to propyl gallate. Thus, propyl gallate has a selective effect on tumoral cells in certain concentrations. This is expressed by the inhibition of the activity of dehydrogenases which participate in various reduction-oxidation processes as well as of cytochrome oxidase. The thus influenced cells lose their implantation power. There are 3 figures and 6 references, 5 of which are Soviet.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR
(Institute of Chemical Physics of the Academy of Sciences, USSR)

SUBMITTED: November 25, 1958

Card 3/3